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Engineers and Surveyors

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November 11, 2009

Tom Harrington
Jefferson Local Development Corporation
P.O. Box 1079
Whitehall, Montana 59759

Subject: Veterans Home

Dear Tom:

The following is an analysis of the ability of the Town of Boulder to provide wastewater treatment for the proposed Veterans Home Project. Based on the numbers I received from your office, the following wastewater flow projection was developed:

Property Owners/Uses	Unit	Number of Units	*Flow (Gal/Unit/Day)	Future Use
Veterans Home	Employee	80	11	880
	Bed	60	106	6,360
	Visitor	25	6	150
Totals - Average Day Wastewater Flow (gpd):				7,390
Totals - Peak Hour Flow (gpm)**				20.5
Equivalent Population ***				49.3

* Values from: Metcalf & Eddy. *Wastewater Engineering. Treatment, Disposal, Reuse*. McGraw-Hill Inc., 1997.

** Based on a peaking factor of 4

*** Based on a wastewater production rate of 150 gpd per person. This value was obtained by comparison of the design population to the flowrate in the discharge permit.

According to the City of Boulder discharge permit the design population for the existing wastewater treatment system is 1665 people. The predicted population for the City of Boulder for the year 2026, about 17 years into the future, is 1590 people. This population prediction was reported in the *Preliminary Engineering Report, Water and Wastewater Extension to Boulder South Campus and the Evans Addition* dated in November, 2007. In the year 2026 the wastewater treatment system will be at about 98% of capacity if no improvements are made in the interim, with the addition of the Veterans Home.